In operation, the buffer solution in lower chamber **10** surrounds dialysis capsule **9**. Dialysis capsule **9** is preferably a collodion sleeve with a reject limit of 10,000 Dalton, such as the SM 13200 sleeve made by Sartorius. (Sartorius GmbH, Göttingen, F.R.G.).

Proteins or polypeptides from the gel-buffer solution in upper electrode chamber **4** are eluted and collected in dialysis capsule **9** when a voltage of, for example, 80 to 100 V and a current intensity of, for example, 10 mA are applied to electrodes **1** and **11**. The elution process is generally continued for 10 to 24 hours.

With a longer dialysis capsule **9**, the height of lower electrode chamber **10** can be varied, for example, by means of a cylindrical intermediate piece (not shown) which can be placed on top of side wall **34**.

In a further modification of the present invention, the bottom surface of upper chamber **4** can be provided with a plurality of funnel shaped portions, a corresponding number of connecting passages can be provided in septum **30**, and a corresponding number of dialysis capsules can be arranged in lower electrode chamber **10** at the end of the respective passages, in order to simultaneously elute proteins in the same process step.

The top, bottom and side walls of the electrode chambers, as well as tube **13** and ring **8** are preferably made of an insulating material such as Plexiglass. The elution buffer in both chambers (**4**, **10**) e.g. is 25 mM Tris buffer, adjusted to pH 8.6 with glycin to which 0.2% SDS and 0.5% mercaptoethanol is added.

It will be understood that the above description of the present invention is susceptible to various modifications, changes and adaptions, and the same are intended to be comprehended within the meaning and range of equivalents of the appended claims.

What is claimed is:

1. An apparatus for the quantitative elution of proteins or polypeptides from a gel by means of electrophoresis, said apparatus comprising:

an upper electrode chamber for holding a buffer solution containing the gel from which the proteins or polypeptides are to be eluted,

an upper electrode in the upper electrode chamber;

a lower electrode chamber for holding a buffer solution and disposed beneath said upper electrode chamber,

a lower electrode in the lower electrode chamber;

a septum separating the upper chamber from the lower chamber;

a connecting passage in the septum for connecting said upper and lower electrode chambers; and

a collecting capsule for collecting the proteins of polypeptides, the collecting capsule being disposed at the end of said connecting passage in said lower electrode chamber, and adapted to be suspended in the buffer solution which is to be held in said lower electrode chamber.

2. An apparatus as defined in claim **1**, wherein said upper and lower electrodes are oriented perpendicularly to a longitudinal axis passing through said connecting passage.

3. An apparatus as defined in claim **1**, wherein said upper and lower electrodes have a planar shape.

4. An apparatus as defined in claim **1**, wherein said upper and lower electrodes have an annular shape.

5. An apparatus as defined in claim **1**, further comprising a mounting means for adjustably mounting said upper electrode in the upper electrode chamber and for coupling a supply voltage to said upper electrode.

6. An apparatus as defined in claim **1**, wherein said upper electrode chamber has a bottom shaped in the form of a funnel; and further comprising a tube disposed in said connecting passage, with the passage extending from the lowest portion of the funnel shaped bottom of said upper electrode chamber to said lower electrode chamber.

7. An apparatus as defined in claim **6**, further comprising a means for sealing said tube with respect to said upper electrode chamber.

8. An apparatus as defined in claim **6**, wherein the tube has an end extending into said lower electrode chamber, said end has a frustoconical shape, and said collecting capsule is a dialysis capsule; and said apparatus further comprises a clamping ring for clamping said dialysis capsule onto said frustonically shaped end.

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